

<b>UnumProvident Corporation</b>	)	<b>Departmental</b>
<b>Cumberland County</b>	)	<b>Findings of Fact and Order</b>
<b>Portland, Maine</b>	)	<b>Air Emission License</b>
<b>A-657-71-E-M</b>	)	<b>Amendment #1</b>

After review of the air emissions license minor revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

UnumProvident Corporation (UnumProvident) of Portland, Maine was issued Air Emission License A-657-71-D-R on October 10, 2002, permitting the operation of emission sources associated with their insurance office complex.

### **B. Minor Revision Description**

HO2 Boiler #2 recently failed, and requires complete replacement. This natural gas-fired boiler was rated at 10.0 MMBtu/hr and was used to provide heat and hot water to the facility. UnumProvident plans to replace this boiler with five smaller boilers (HO2 Boiler #2a, 2b, 2c, 2d and 2e) with a total heat input capacity approximating that of the original boiler. The facility proposes to maintain the same fuel limits, therefore there will be no change in the total facility-wide emissions.

This minor revision also addresses correcting the NSPS reporting requirements for Boiler HO2-Boiler #1 (there are no semi-annual reports due for natural gas fired boilers) and revising the Generator emission limits to reflect those in AP-42.

### **Fuel Burning Equipment**

Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, % Sulfur	Maximum Firing Rate (scf/hr)	Stack #
HO1-Boiler #1	1994	2.4	Natural Gas	2330	4
HO1-Boiler #2	1994	1.0	Natural Gas	970.9	5
HO2-Boiler #1	1995	10	Natural Gas	9709	1
<b>HO2-Boiler #2a</b>	<b>2002</b>	<b>2.07</b>	<b>Natural Gas</b>	<b>2009.7</b>	<b>1</b>
<b>HO2-Boiler #2b</b>	<b>2002</b>	<b>2.07</b>	<b>Natural Gas</b>	<b>2009.7</b>	<b>1</b>
<b>HO2-Boiler #2c</b>	<b>2002</b>	<b>2.07</b>	<b>Natural Gas</b>	<b>2009.7</b>	<b>1</b>

**Fuel Burning Equipment (Continued)**

Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (scf/hr)	Stack #
<b>HO2-Boiler #2d</b>	<b>2002</b>	<b>2.07</b>	<b>Natural Gas</b>	<b>2009.7</b>	<b>1</b>
<b>HO2-Boiler #2e</b>	<b>2002</b>	<b>2.07</b>	<b>Natural Gas</b>	<b>2009.7</b>	<b>1</b>
HO2-Boiler #3	1996	1.0	Natural Gas	970.9	1
HO3-Boiler #1	1998	4.5	Natural Gas	4369	6
HO3-Boiler #2	1998	4.47	Natural Gas	4344	7
HO3-Boiler #3	1998	4.47	Natural Gas	4344	7
HO3-Boiler #4	1998	4.47	Natural Gas	4344	7

**Bold** indicates new equipment

C. Application Classification

The application for UnumProvident includes the installation of new equipment. However, the overall emissions from the facility remain the same. Therefore the license is considered to be a minor revision and has been processed as such.

**II. BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new equipment requires a demonstration that emissions are receiving Best Available Control Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. New Boilers

HO2-Boiler #2a, 2b, 2c, 2d, and 2e each have a heat input less than 10.0 MMBtu/hr and are therefore not subject to New Source Performance Standards (NSPS) Subpart Dc.

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BACT for HO2-Boiler #2a, 2b, 2c, 2d, and 2e:

- Use of natural gas.
- SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission data was taken from AP-42 dated 10/96 for boilers having a heat input of 0.5 to 10 MMBtu/hr firing natural gas.
- Emission limits of 0.05 lb/MMBtu for PM and PM<sub>10</sub>.
- Visible emissions from the stack serving HO2-Boiler #2a, 2b, 2c, 2d, and 2e (Stack 1) shall not exceed an opacity of 10 percent on a six (6) minute block average basis.

### III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

### ORDER

The Department hereby grants Air Emission License amendment A-657-71-E-M subject to the conditions found in Air Emission License A-657-71-D-R and in the following conditions:

**The following shall replace Condition (16) of license A-657-71-D-R:**

(16) Boilers

A. Emissions from HO1-Boiler #1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.29
PM <sub>10</sub>	0.29
SO <sub>2</sub>	0.01
NO <sub>x</sub>	0.23
CO	0.20
VOC	0.01

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B. Emissions from HO1-Boiler #2 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.12
PM <sub>10</sub>	0.12
SO <sub>2</sub>	0.01
NO <sub>x</sub>	0.10
CO	0.08
VOC	0.01

C. Emissions from HO2-Boiler #1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	1.20
PM <sub>10</sub>	n/a	1.20
SO <sub>2</sub>	n/a	0.01
NO <sub>x</sub>	n/a	0.97
CO	n/a	0.82
VOC	n/a	0.05

D. New Source Performance Standards for HO2-Boiler #1:

1. UnumProvident shall comply with the requirements of Federal New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc for HO2-Boiler #1 with the exception that fuel usage shall be maintained on a monthly basis and fuel usage must be monitored separately for each boiler.

E. Emissions from HO2-Boiler #2a, 2b, 2c, 2d and 2e shall not exceed the following (each):

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.10
PM <sub>10</sub>	0.10
SO <sub>2</sub>	0.01
NO <sub>x</sub>	0.20
CO	0.17
VOC	0.01

F. Emissions from HO2-Boiler #3 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.12
PM <sub>10</sub>	0.12
SO <sub>2</sub>	0.01
NO <sub>x</sub>	0.10
CO	0.08
VOC	0.01

G. Emissions from HO3-Boiler #1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.54
PM <sub>10</sub>	n/a	0.54
SO <sub>2</sub>	n/a	0.01
NO <sub>x</sub>	n/a	0.44
CO	n/a	0.37
VOC	n/a	0.02

H. Emissions from HO3-Boiler #2, #3 and #4 shall not exceed the following (each):

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.10	0.54
PM <sub>10</sub>	n/a	0.54
SO <sub>2</sub>	n/a	0.01
NO <sub>x</sub>	n/a	0.43
CO	n/a	0.36
VOC	n/a	0.02

- I. All licensed boilers at UnumProvident shall fire only natural gas.
- J. UnumProvident shall fire no more than 100,000,000 cubic feet of natural gas facility wide, based on a 12-month rolling total. Compliance shall be based on natural gas receipts from the supplier showing the quantity of fuel burned.
- K. Visible emissions from each stack serving the licensed boilers at UnumProvident (Stack 1, 4, 5, 6 and 7) shall not exceed an opacity of 10 percent on a six (6) minute block average basis.

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**The following shall replace condition (17)(A), (B) and (C) of license A-657-71-D-R:**

**(17) Emergency Generators**

A. Emissions from Emergency Generator HO1-Gen#1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.49
PM <sub>10</sub>	0.49
SO <sub>2</sub>	0.08
NO <sub>x</sub>	7.01
CO	1.51
VOC	0.57

B. Emissions from Emergency Generator HO2-Gen#2 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.82
PM <sub>10</sub>	0.82
SO <sub>2</sub>	0.14
NO <sub>x</sub>	11.73
CO	2.53
VOC	0.96

C. Emissions from Emergency Generator HO3-Gen#3 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.43
PM <sub>10</sub>	0.43
SO <sub>2</sub>	0.07
NO <sub>x</sub>	6.09
CO	1.31
VOC	0.50

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**The following are new conditions to license A-657-71-D-R:**

(19) This amendment shall expire concurrently with Air Emission License A-657-71-D-R.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 4, 2002

Date of application acceptance: November 4, 2002

Date filed with Board of Environmental Protection: \_\_\_\_\_

This order prepared by Mark. E. Roberts, Bureau of Air Quality